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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Group Art Unit: 1635 In the Application of Examiner: S. McGarry Crooke and Graham Appln No. 09/919,197 July 31, 2001 Filed: RECEIVED For: ANTISENSE MODULATION OF APR 1 6 2003 SHORT HETERODIMER PARTNER-1 EXPRESSION

Commissioner for Patents Washington, D. C. 20231

TECH CENTER 1600/2900

POWER OF ATTORNEY BY ASSIGNEE OF ENTIRE INTEREST AND REVOCATION OF PRIOR POWERS AND STATEMENT UNDER 37 CFR §3.73(b)

Sir:

As assignee of record of the entire interest of the above-identified application, ISIS PHARMACEUTICALS, INC. hereby revokes all powers of attorney previously given.

ISIS PHARMACEUTICALS, INC. hereby appoints the following attorney(s) and/or agent(s) to prosecute and transact all business in the United States Patent and Trademark Office connected with the above-identified application: Stanley B. Kita, Registration No. 24,561; George A. Smith, Jr., Registration No. 24,442; Mary E.

Certificate of Mailing under 37 CFR Section 1.8

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to Commissioner for Patents, Washington, DC 20231 on Date

Typed or Printed Name of Person Signing Certificate

Bak, Registration No. 31,215; Cathy A. Kodroff, Registration No. 33,980; William Bak, Registration No. 37,277; Tracy U. Palovich, Registration No. 47,840; all of the firm of HOWSON AND HOWSON, of Spring House, Pennsylvania; and

Herb Boswell, Registration No. 27311; Laurel S. Bernstein, Registration No. 37,280; Neil S. Bartfield, Registration No. 39,901; Matthew Grumbling, Registration No. 44,427; Donna T. Ward, Registration No. 48,271, all of ISIS PHARMACEUTICALS, INC., of Carlsbad, California.

Address all telephone calls to Mary E. Bak at telephone No. (215) 540-9206. Address all correspondence to HOWSON AND HOWSON, Spring House Corporate Center, Box 457, Spring House, Pennsylvania 19477.

ISIS PHARMACEUTICALS, INC. certifies that it is the assignee of the entire right, title and interest in the patent application identified above by virtue of an assignment from the inventors.

The evidentiary documents relating to the ownership of the above-identified application and the invention claimed therein have been reviewed, and consist of an assignment of the above-identified United States Patent Application No. 09/919,197 from the inventors to ISIS PHARMACEUTICALS, INC. The assignment was recorded at Reel 012467, Frame 0630 on January 10, 2001 at the United States Patent and Trademark Office.

The undersigned has reviewed all the documents in the chain of title of the patent application identified above, and, to the best of undersigned's knowledge and belief, title is in the assignee identified above.

The undersigned is empowered to sign this certificate on behalf of the assignee. To the best of the undersigned's knowledge and belief, title is solely in the assignee ISIS PHARMACEUTICALS, INC.

I hereby declare that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made, are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application, or any patent issuing thereon.

ISIS PHARMACEUTICALS, INC.

DATE 4/4/03

ΒY

B Lynne Parshall

Executive Vice President

OIPE

PTO/SB/21 (03-03)

Approved for use through 4/30/2003. OMB 0651-0031

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| r. | | Application Number | 09/919,197 | |
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| | | Group Art Unit | 1635 | |
| | | Examiner Name | S. McGarry | |
| Total Number of Pages in this Submission | 4 . | Attorney Docket Number | ISPH-0593 | |
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| Fee Transmittal Form | D | Drawing(s) | After Allowance Communication | |
| ☐Fee Attached | | icensing-related Papers | to Group | |
| Amendment/Reply | | Petition | Appeal Communication to Board of Appeals and Interferences | |
| After Final | | Petition to Convert to a | Appeal Communication to Group (Appeal Notice, Brief, Reply Brief) | |
| Affidavits/declaration(s) | 162 | Provisional Application Power of Attomey, Revocation | Proprietary Information | |
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| Information Disclosure Statement | · ' 📙 🖡 | Request for Refund | identify below): | |
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| Response to Missing Parts/ | | 그는 사람들은 사람들은 그 중에 가는 것을 통하는데 이 통하는데 사람들은 사람들은 사람들은 경우를 하는데 살아 하는데 살아 다른데 살아 다른데 살아 다른데 나를 다 하는데 나를 다 하는데 나를 다 하는데 살아 다른데 다른데 하는데 하는데 나를 다 하는데 | | |
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| urder 37 CFR 1.52 or 1.53 | - | | | |
| SIG | NATURE O | F APPLICANT, ATTORNEY | , OR AGENT | |
| Firm or Individual Name HOWSON AND HOWSON Mary E. Bak, Esquire | | | | |
| Signature Mass & Bok | | | | |
| Date 4/09/03 | | | | |
| CERTIFICATE OF TRANSMISSION/MAILING | | | | |
| I hereby certify that this correspondence is be postage as first class mail in an envelope add | ing facsimile tra lressed to: Com | ansmitted to the USPTO or deposited missioner for Patents, Washington, I | with the United States Postal Service with sufficient DC 20231 on this date: 4/9/03 | |
| Typed or printed name Diana M. Waligun | | | | |
| Signature Diana W. Walipur Date 4/09/03 | | | | |

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